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FOREIGN AND SECOND LANGUAGE LEARNING IN THE PRIMARY SCHOOL.

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EXPERIMENTS ON LANGUAGE LEARNING WERE CONDUCTED IN WALES WITH 26 8-YEAR OLD CHILDREN, OF MIXED ABILITY, BILINGUAL IN ENGLISH AND WELSH, AND ABOUT TO LEARN GERMAN. A STUDY OF THE LEARNING PROCESSES WAS MADE BY A VARIETY OF TESTS USED TO MEASURE LISTENING, UNDERSTANDING, IMITATING, AND WRITING. PRESENTED IN THIS DOCUMENT ARE THE DIFFERENT EXPERIMENTS, THE EXPLANATORY CHARTS, AND THE RESULTS WHICH CAN HELP IN SETTING UP THE MOST EFFICIENT PROGRAM FOR A LEARNER TO ACQUIRE AND RETAIN SENTENCE MEANING WHILE LEARNING TO PRONOUNCE THE FOREIGN LANGUAGE. ANOTHER SECTION OF THE PAMPHLET DEALS WITH METHODOLOGY, AND DETAILS SUCH TOPICS AS USING INSTRUCTIONAL MATERIALS, EMPLOYING SPECIFIC TEACHING TECHNIQUES AND LESSONS, VARYING CLASSROOM SITUATIONS, AND USING AUDIOVISUAL AIDS AND THE LANGUAGE LABORATORY. A SECTION ON THE INFANT SCHOOL GIVES SUGGESTIONS FOR A LANGUAGE COURSE BEGINNING AT THE NURSERY LEVEL FOR THE PURPOSE OF DEVELOPING TRULY BILINGUAL INDIVIDUALS. THIS DOCUMENT IS AVAILABLE BY TITLE FOR 5 SHILLINGS FROM THE DEAN, FACULTY OF EDUCATION, UNIVERSITY COLLEGE OF WALES, CAMBRIAN STREET, ABERYSTWYTH, WALES. (SS)

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CYMRU, ABERYSTWYTH

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C. J. DODSON

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I WISH to express my sincerest thanks to Mr J. Hywel Jones, headmaster of Ysgol Gymraeg, Aberystwyth, for allowing me to take one of his junior classes for three lessons per week over a period of three years. He and his staff have been extremely helpful on all occasions and it has been a pleasure to work at the school.

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I am grateful to Professor Jac L. Williams for letting me publish this material as a Faculty pamphlet and for his constant encouragement during the research project. I also wish to thank Mrs D. Tinker for preparing the pictures used in the experiments.

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C. J. DODSON.

INTRODUCTION

SINCE the end of World War II, international travel and trade has made many individuals acutely aware of the fact that the foreign-language tuition they received at secondary-school level has not prepared them adequately to communicate orally with people from other countries.

This realisation, coupled with new findings from the field of neurology and linguistics, has led towards the view that it might be more profitable to start foreign-language learning at primary-school level, especially as pupils will not be hindered in their quest for genuine oral proficiency by outmoded external examinations.

The development of modern teaching methods and audio-visual aids has accelerated the rate of experimentation in primary schools. The enthusiasm shown is great, yet our knowledge of how young children learn languages best in classroom conditions is still very scanty.

This pamphlet describes some of the experiments made in foreign-language teaching at the Ysgol Gymraeg, Aberystwyth, with a class of twenty-six children, who were of mixed ability, bilingual in Welsh and English, and eight years of age at the start of a three-year course in German. During this time the pupils participated in a large number of experiments, both as individuals and as a class.

It is hoped that the results of this work may be of benefit to primary-school language teachers, especially to those in Wales, where Welsh is taught as a second language in the junior school.

LEARNING PROCESSES

MODERN theory quite rightly emphasizes that the pupil must undergo learning processes arranged in a particular order to consolidate foreign-language material in the most effective manner. The order of the initial processes is (1) listen, (2) understand and (3) imitate. Unfortunately, little research has been done to ascertain and measure the variables at work in these processes. As a result, the teacher is forced to rely on general principles which have not been subjected to the rigorous tests normally required in other fields of study. The problem is aggravated by high-pressure sales techniques applied by commercial firms who supply the equipment and materials needed by the schools.

LISTENING AND UNDERSTANDING

The first two processes are closely linked and deal with the problem of how the learner can best acquire and retain the meaning of spoken foreign-language sentences. The general principles held to be valid for these learning processes are (1) the mother tongue must not be used to explain the meaning of FL (foreign language) sentences, and (2) the teacher must convey sentence meaning by establishing correspondences between (a) actions, or (b) objects, or (c) qualities, or (d) a combination of (a), (b) and (c), or he must convey meaning by means of pictures (audio-vision courses).

For instance, if the teacher wishes to convey the meaning of "The boy jumps over the wall" he must make appropriate actions of JUMPING in the classroom in order to convey the meaning of the verb. For the sentence, "The pen is on the table", he must have available a series of pens which he shows whilst saying the FL sentence over and over again in order to establish the meaning of PEN and to ensure that the pupils do not assume that he might also be including the concept PENCIL in his sentence. For the sentence, "The pencil is brown", the teacher must have available a number of brown objects to establish the meaning of the adjective.

Audio-visual courses attempt to convey sentence meaning by means of pictures projected onto a screen. The pictures must be carefully drawn to avoid ambiguities, especially as it is difficult to

show correspondences between actions, objects and qualities in single frames, and to use up a series of frames to establish the meaning of one word is a wasteful procedure.

A number of experiments, consisting of 1,725 measurements, was made to establish the most efficient way in which a learner can acquire and retain sentence meaning whilst he is learning how to pronounce FL sentences fluently and accurately, and at the same time to test the above-mentioned principles together with other principles at present rejected by the theorists.

Individual pupils were presented with

(1) 2 groups (1a and 1b) of spoken FL sentences, consisting of 3 sentences each, together with specially prepared pictures representing the meaning of the sentences. The tester also made use of actions, objects and qualities to reinforce the clarity of meaning,
(2) 2 groups (2a and 2b) of spoken FL sentences, consisting of 3 sentences each, together with specially prepared pictures representing the meaning of the sentences, but initially the pupils were given the mother-tongue equivalent of the sentences after which the tester offered no further help, and
(3) one group of three spoken FL sentences together with the mother-tongue equivalent of the sentences but no pictures or other help.

Every sentence was spoken 15 times by the tester. The child had to learn to say the sentence by imitating each spoken stimulus. After every third response, the child was asked the meaning of the sentence he was speaking. This resulted in 5 meaning checks for every sentence. For experiments 2a and 2b a correction of meaning was given, where necessary, after the third meaning check. The results are given in *Fig. 1*

The graph shows the amount of meaning acquired and retained during imitation by all the children tested.

The technique used to present groups 1a and 1b was identical to that employed in audio-visual courses, except that the tester used all resources available to re-inforce meaning during each spoken stimulus. For instance, one of the sentences was "The boy opens the drawer and takes out a piece of paper" portrayed by means of two pictures, each representing one clause. If the pupil was not able to acquire the meaning of the sentence from the two pictures in front of him the tester opened a drawer and took out a piece of paper whilst at the same time synchronising the spoken stimulus with the separate actions. This additional re-inforcement is, of course, not possible with normal audio-vision presentation. Nevertheless, the results indicate that this is the least effective way of conveying meaning.

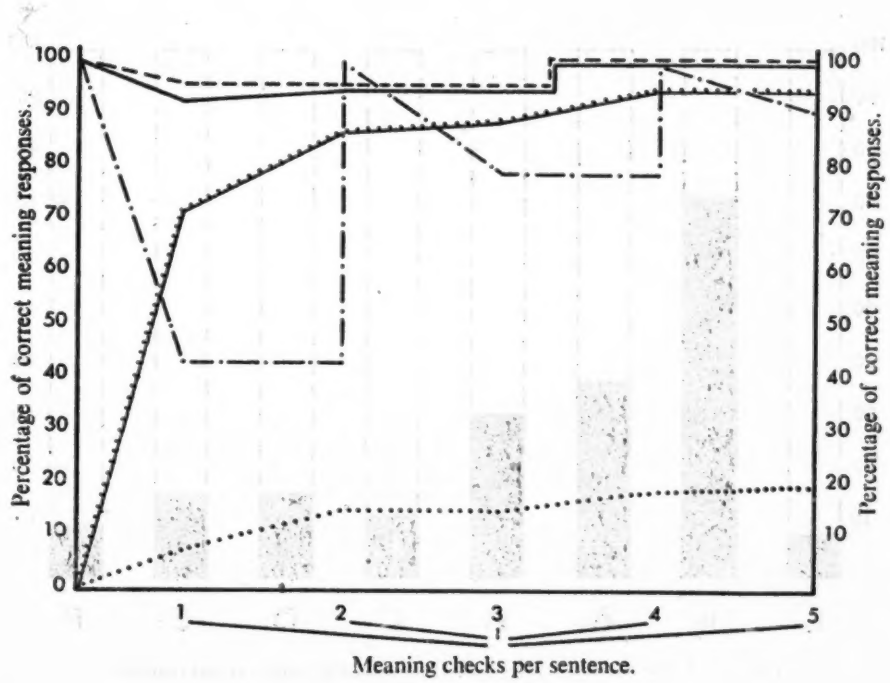


Fig. 1. Acquisition and retention of sentence meaning (5 modes of presentation.)

For group 1a, the meaning developed very slowly and did not rise over an efficiency level of 20% after 15 contacts and 5 meaning checks including re-inforcing procedures. On the other hand, meaning for group 1b was more readily grasped, but once again not all the children were able to acquire the meaning of the sentences they were speaking.

As these pictures had been carefully prepared for the experiments, further tests were made with pictures from actual audio-visual courses now on the market.

Fig. 2 shows the amount of meaning conveyed by seven sets of pictures. 1a and 1b are the two sets of pictures used in Aberystwyth experiments and show the amount of meaning acquired at the first meaning check. Sets A to E are frames used in the first five lessons (approximately 20 pictures per lesson) of an audio-

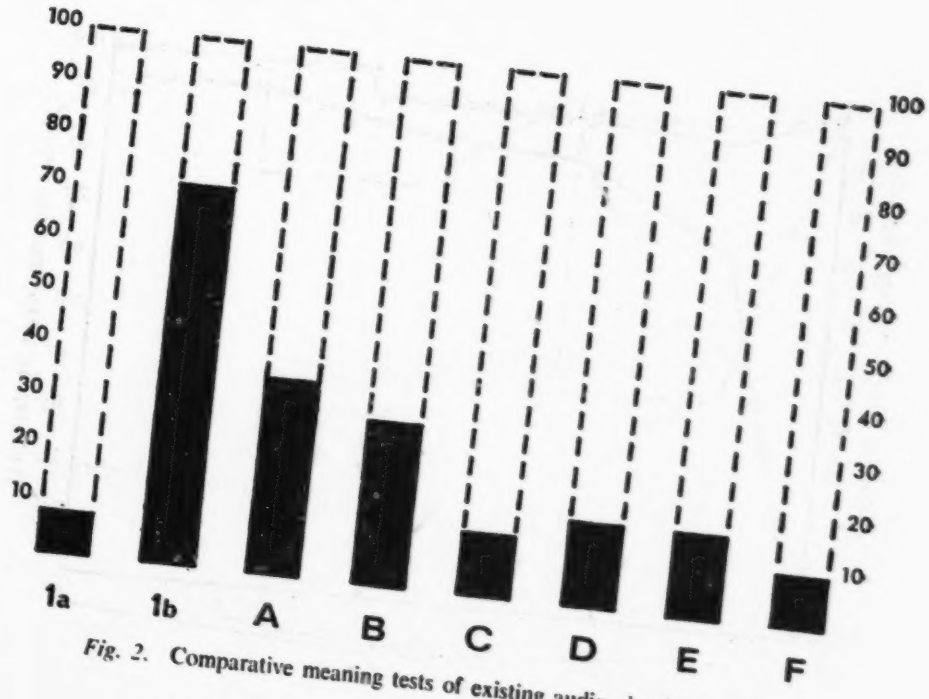


Fig. 2. Comparative meaning tests of existing audio-visual courses.

1a + 1b = Picture sets prepared for the experiments.

visual course being marketed now. F shows the results obtained from a second course. Other well-known courses gave the same results. These commercial courses are little better than the worst set used in the experiments and fall far short of set 1b, which contained pictures with which the children could cope reasonably well but which were still not satisfactory from a class-teaching point of view.

It is often argued that it matters little if the learner cannot acquire the correct meaning or any meaning when first faced with the pictures, so long as the meaning develops as the lessons progress. The experiments showed that some children will never hit upon the right meaning, no matter how often the picture is shown or what the teacher does to clarify the procedure. This problem is complicated further by the fact that the pictures affect the individual child in various ways, depending on his pre-perceptions. Whilst child A is able to acquire the meaning of picture 1 and child B is not, the roles may well be reversed for picture 2. The teacher has, therefore, little knowledge of which child has the correct meaning and which child has not during imitation drills.

There is also a school of opinion which holds that the problem

of meaning will disappear once the class has concluded the imitation exercises and has gone over to the question-and-answer procedure for any particular set of lesson material. It was found, however, that the average child quickly learns to give the correct verbal response to almost any stimulus, no matter whether in imitation, substitution or question-and-answer exercises, without necessarily being aware of the meaning of the response. The teacher can easily be deceived by the fluent and accurate responses his pupils might give if he does not introduce some form of meaning check which does not consist of the actual FL responses made by the pupils.

Perhaps the most important argument against those who support the development of meaning will be given in the section dealing with imitation experiments, which showed that uncertainty of meaning or of endeavour to guess the correct meaning has a detrimental effect on the pupils' ability to imitate and mimic.

Groups 2a and 2b gave the best results in the meaning experiments. Here the mother-tongue equivalent of the FL sentences was given before the imitation procedure started. It will be noted that the pictures did not enable all the children to retain the correct meaning. At the first meaning check (after 3 imitation responses) some 6-7% of the children had forgotten or distorted the meaning in spite of the fact that pictures were available to remind them of the original meaning given at the beginning. Lost meaning could not be regained even after a further 6 imitation responses. After the third meaning check, a correction was given and the meaning level rose to 100% where it remained until the end of the experiments.

For group 3 merely the mother-tongue equivalent of the FL sentences was given before the start of the imitation procedure. At the first meaning check, over 50% of the children had lost the meaning, though this did not deteriorate after further imitation responses. The meaning was given again in the mother-tongue after the second check, but the level dropped once again after another 3 imitation responses, though only about 25% of the children had lost the meaning at the third meaning check.

It can be assumed that such oscillation will eventually lead to a 100% meaning level, but it does not seem worth all the extra meaning stimuli which the teacher has to give, when the presence of pictures can help the learner to retain the meaning during imitation exercises. In any case, the teacher should not ignore the visual aspect in the language-learning process, especially as it makes not only learning but also teaching so much less burdensome. It is interesting to note that in similar experiments with secondary-school children, hardly any meaning loss occurred with group 3 presentation.

Another important factor in a comparison of the three modes of presentation is that of time. The time taken by the individual pupil to acquire and retain meaning and reach a level of consolidation in sentence imitation varied considerably from experiment to experiment. The average time taken per child was as follows:

group	1a	20	minutes
„	1b	20	„
„	2a	10	„
„	2b	15	„
„	3	10	„

Although other factors, to be discussed later, were involved in the length of time for the experiments for each child, the fact that the tester was forced to perform actions or show objects already portrayed in the pictures in order to help the pupil to acquire and/or retain the correct meaning, gave rise to the very high times for groups 1a and 1b.

The meaning experiments clearly indicated that the most efficient and rapid method of presentation for the learner is the one where the meaning of the FL sentence is acquired by means of the mother-tongue equivalent and retained by means of pictures.

It seems that the average primary-school child (age 8 upwards) is not able to cope efficiently with two separate learning processes simultaneously. The child cannot easily retain sentence meaning while at the same time making spoken imitation responses. The use of the mother tongue as a conveyor of meaning had no effect whatsoever on the fluency and accuracy of the FL responses made during the imitation procedure. In fact, it is difficult to find reasons why this should have a detrimental effect on language learning.

Nevertheless, producers of audio-visual courses and direct-method teachers tend to reject this method out of hand without having examined very closely whether there is a definite connection between the acquisition of sentence meaning through an initial mother-tongue equivalent and the pupils' subsequent performance in language learning.

Some leading manufacturers are now having second thoughts and are advocating that the gist of the story portrayed in their audio-visual courses should initially be given in the mother tongue, or that the mother tongue should be used to explain the meaning of some film frames which cause obvious difficulty or ambiguity. Whilst giving the meaning of the more ambiguous film frames is a step in the right direction, it was found that merely giving the gist of the story portrayed in the total audio-visual

lesson led to further difficulties, because the children associated the precise meanings of the spoken sentences with the *approximate* meanings given during the initial telling of the story in the mother tongue. In many instances, this caused the child to associate FL words or sentence elements with the meaning of other concepts expressed before the imitation exercise commenced.

For example, in a separate experiment when, at the story-telling stage, the teacher asked the child in the mother tongue about the time shown in the frame showing a clock, the response was "seven o'clock". Yet the spoken sentence on the tape to be used as a model for imitation work was "Il est sept heures". Some children immediately assumed that "il est" meant "seven" and "sept heures" meant "o'clock".

Consequently the best results in terms of speed and quality are obtained if the sentence meaning is acquired by means of the mother-tongue equivalent spoken by the teacher, and is retained by means of pictures.

Imitating

5,175 measurements were made to ascertain the most favourable combination of stimuli which would produce the best pronunciation results during imitation exercises.

The sentences in the experiments were those used in the meaning tests. Four different combinations of stimuli were employed:

A (1a): FL spoken word, picture, FL printed word.
B (1b): FL spoken word, picture.
C (2a): FL spoken word, mother tongue equivalent, picture, FL printed word.
D (2b): FL spoken word, mother tongue equivalent, picture.

The appropriate classifications of the meaning experiments are shown in the brackets. It will be noted that the FL printed word has been added to two meaning groups for the imitation tests. It was not considered worthwhile to conduct large-scale imitation experiments with meaning group 3, as the absence of a visual stimulus, which led to the re-occurring loss of meaning for a large number of children, could not be fully defended for primary-school language teaching. Nevertheless, a small-scale experiment consisting of 9 responses per sentence was made. The results are given at the end of this section.

The sentences used for the separate groups were matched in pronunciation difficulty as far as possible. In order to equate any remaining discrepancies in the degree of pronunciation difficulty, all the sentences were presented to another group of children, but

by a single mode of presentation. The imitation performance of this control group was then used to adjust the final scores obtained by the four groups, so as to eliminate any distortion caused by the varying degrees of difficulty which might invalidate any distinction to be made between different modes of presentation.

The performances obtained for the individual groups of presentation is shown in *Fig. 3*—

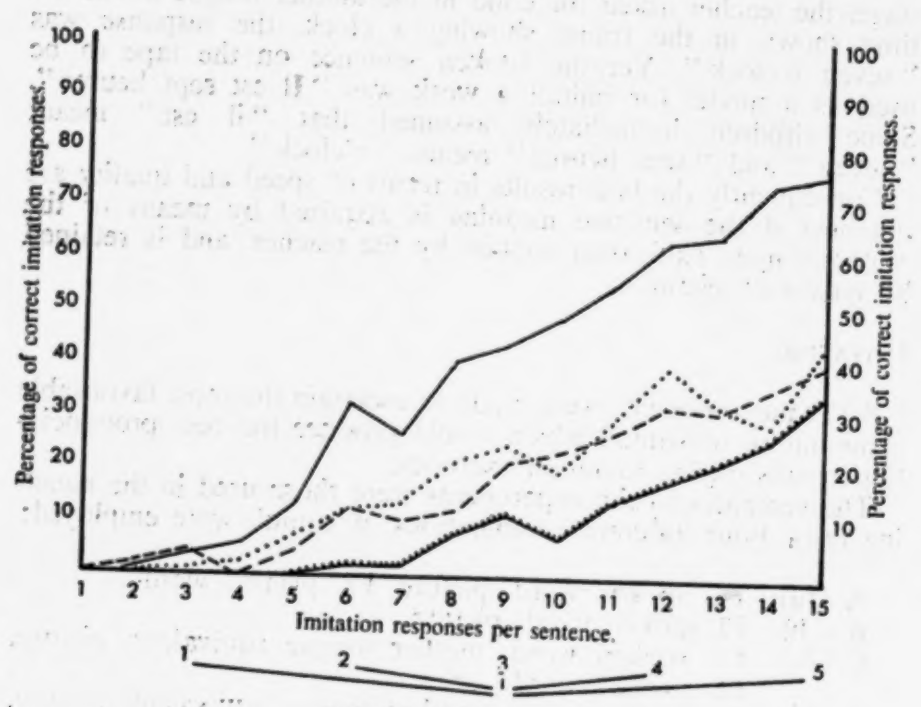


Fig. 3 Development of proficiency in imitation. (4 modes of presentation.)

Each individual pupil had to respond to each of 15 spoken stimuli for every sentence. The number of incorrect and correct responses was noted and represents the learning performance in *Fig. 3.*

Group C clearly coped much better with the material than any other group. Group A came second in performance. The common

factors between C and A were the FL spoken stimuli, the picture and the printed word. The meaning graph (*Fig. 1*) shows, however, that the children of group A had not grasped the meaning of the sentences they were learning to speak. As this is the only difference between C and A, it seems that any uncertainty regarding meaning has a detrimental effect on imitation performance.

Groups D and B came last in performance. Group D did not have available the printed word but was aware of the meaning, though nevertheless D was slightly worse than A. This tends to indicate that the availability of the printed word (see section "The printed word") is a stronger factor in a child's ability to pronounce and imitate correctly than the factor of knowing the meaning of the sentence, though a combination of both gave the exceptionally good results of group C.

Group B was supplied with pictures and the FL spoken stimulus. Meaning developed slowly though much faster than with group A (*Fig. 1*). Yet a combination of "meaning uncertainty" and the absence of the printed word made presentation B the least efficient method of all the tests made.

Modern audio-visual courses are based on the techniques used for group B. In fact, during the experiments, the pupils were given a greater degree of help with regard to the acquisition of sentence meaning than is possible in a semi-darkened room during an audio-visual lesson, and the results of group B should, therefore, be slightly better than those obtained with audio-visual courses conducted in the manner perscribed by the manufacturers.

The best possible combination of stimuli for the most efficient learning and consolidating of new FL material seems, therefore, to be:

(1) FL spoken stimulus.
(2) Mother-tongue equivalent for the acquisition of sentence meaning.
(3) Pictures and other visual-aids for the retention of sentence meaning.
(4) Availability of FL printed word for increased imitation performance.

The results of the small-scale experiment with the group which did not have available a picture but merely the mother-tongue equivalent and the FL spoken word were better than A. The probable cause for this was that more children were certain of the sentence meaning at any given time. No check was made, however, to ascertain how able the learner is to weld together in his mind "situation" and FL expression without visual aids. Such

an experiment would be most complex and would require years of testing and a vast sample. This method is, therefore, not recommended—although at times the teacher may be forced to give the MT equivalent without a re-inforcing visual stimulus—because it cannot be said with reasonable certainty what effect this method might have on the proper development of imagination of the very young child. If it could be shown that the total effect on the development of the young child's imagination were not detrimental, little objection could be raised against this approach, which is probably valid for the older learner.

The Printed Word

Separate experiments were made to examine further the fact that the availability of the FL printed word helps the learner to speak FL sentences faster and better. This set of experiments was conducted with a whole class and not with individuals, as in the above tests. A description of how the teacher uses the printed word in class teaching is given in the section dealing with methodology.

The purpose of the first series was to record the number of contacts (listening and responding) and the number of minutes required to consolidate the learning of FL material framed in situations, taught with and without the aid of the printed word. Each paired situation consisted of 6 sentences of equal total length and matched in pronunciation as far as possible. The children were given the MT (mother tongue) equivalent of the FL sentences before each experiment so as to avoid the additional problem of sentence meaning. For the experiments using the printed word, the FL sentences were written on the board and no other aids were given. For the experiments without the printed word, picture strips representing the individual elements of the sentences were drawn on the board. As in the experiments with individual pupils, the classroom activity was focused on making the pupils imitate the FL sentences until a stage was reached when the children could say them fluently and accurately.

The important point to remember is that in all experiments, the children were made to rely on the spoken stimuli given by the teacher, though in experiments with visual aids, constant reference was made to the pictures whenever the teacher spoke a FL sentence. Whenever the printed word was available but no other aids, as in the experiment under discussion, the children were encouraged to look at the teacher and only glance at the printed word on the board if they felt that this would help them. The results of a typical comparative experiment were as follows:

	Experiment 1 6 sentences (32 words) *without* the printed word	*Experiment 2* 6 sentences (32 words) *with* the printed word
Teaching time	42 minutes	16½ minutes
No. of spoken stimuli	186	86
No. of spoken responses	290 (50 chorus and 240 individual)	213 (52 chorus and 161 individual)
Average no. of responses per minute	6·9	12·9
Total no. of stimuli and responses	476	299

N.B.—(a) The level of consolidation after 42 minutes work in *Exp. 1* was lower than that of 16½ minutes work in *Exp. 2.*

(b) It was possible to pay greater attention to pronunciation in *Exp. 2* than in *Exp. 1.* Thus the number of stimuli spoken in *2* (86) included pronunciation stimuli, which could not be included in the 186 stimuli of *Exp. 1.*

Experiment 1 showed that the children had great difficulty in retaining the sounds of the longer sentences. Few of them could at first get further than the 3rd or 4th word without receiving an additional stimulus, and there was a considerable amount of mispronunciation. In most cases, the individual sounds in a word (or individual words in a sentence) were inverted or wrongly placed. Word endings faded or were altogether lost. The children were able, however, to imitate almost instantly sentences containing monosyllabic sounds such as "—ist alt und krank" or "—war jung und schön", but at the same time some short sentences such

as "Hans steigt ein" were inclined to become distorted: "Hans streigt ein."

The pace of the lesson was held up when children, although obviously knowing what they wanted to say, failed to do so, even immediately after the teachers had said it. The main obstacle to fluent imitation seemed to be the child's inability to sort out the tangle where one word ended and the next began, although he understood the complete sentence and had been encouraged to practise and "think" the sentence as a unit. The pictures were of no use to him as they referred not to the words but to the sentence elements. It was noticed that any attempt by the teacher to indicate the number of words in the sentence, e.g. by stabbing the air three times for "auf dem Schulhof", often brought forth a correct response after many incorrect attempts by some children.

The numerous stimuli and responses required before members of class were able to say a sentence fluently and accurately, especially for the longer sentences, gave rise to a further severe disadvantage. The average learner is not able to practise any one sentence for more than a few minutes before boredom sets in. Yet, some sentences required a total of 70 stimuli, 70 individual responses and 17 chorus responses before a satisfactory level of consolidation was reached. To avoid boredom, it becomes necessary in this situation to move on to other sentences before returning to the original ones in a later session, but the learner's awareness that he has not mastered any of the sentences at this stage leads to a sense of insecurity which is to be deplored as it affects his performance during future lessons.

A situation like this demands a teacher possessing not only patience and a sense of humour, but also a high degree of stamina and physical and mental fitness. It also demands an understanding of the psychology of learning, which many teachers do not acquire in training or in the schools.

Experiment 2 with the printed word elicited responses which were usually fluent and complete. Having the printed word to refer to helped the children over the mental barrier they experienced in *Experiment 1*, so that they were able to reach the end of the sentence rapidly and confidently. The fact that he had just heard the oral stimulus prevented the learner from merely reading the printed word so that he was able to respond orally whilst just glancing at it.

An accurate sound image of intonation, stressing, speed of delivery, correct pronunciation and the total sound pattern of a sentence spoken by the teacher can be retained for 5-10 seconds before fading. If by that time the learner cannot respond with the complete sentence, all previous work on the sentence has mainly been in vain, and the learning process has to start again from the

beginning. The presence of the printed word as a point of reference enables the response to be made in that period so that the learner can make far greater use of his powers of mimicry.

It also became clear that the children used the initial letters of the words in the printed sentence like signposts to urge them on to the end of the sentence. The other letters in the words could be masked without much loss of proficiency. In the same way, with multi-syllabic words, they relied on the first letters of the syllables.

Since there was little difficulty in imitating the complete sentence in *Experiment 2*, it was possible to pay much more attention to good pronunciation than in *Experiment 1*. Ability to speak the sentence almost immediately also gave the pupils a better opportunity to achieve and secure a level of consolidation, because responses were more numerous and delivered in less time. It never became necessary to proceed to other sentences before consolidation was reached in order to avoid boredom, as in *Experiment 1*. It was noted in *Experiment 1* that the number of oral stimuli was often as great as and sometimes greater than the number of responses made, whilst in *Experiment 2* the complete reverse was the case and the number of responses was generally more than double the number of stimuli given.

Once the children were able to say the sentences properly, they no longer felt any need to refer to the printed word and it could be dispensed with altogether.

The problem of interference caused by the transfer of the fixed associations between familiar mother-tongue sounds and the printed word hardly ever arose. Only a handful of letter combinations caused temporary interference lasting no longer than a few minutes before a correct pronunciation was achieved. This rapid adjustment was due to the fact that the numerous spoken stimuli, on which the children's attention was focused, were strong enough to create the new association whenever the pupils needed to glance at the printed word. Indeed, the proficiency in pronunciation was better in experiments with the printed word than without it, because more time was available for pronunciation drills.

A clear distinction must be made between the learning process dealing with fluent sentence-imitation and the separate learning process dealing with the accurate reproduction of foreign-language sounds. The experiments showed quite clearly that the learner can make little progress in the latter learning process before he has mastered the former. This has to be achieved quickly, certainly no later than 10 seconds after each spoken stimulus. If the total response dealing with fluent sentence-imitation takes longer than 10 seconds, the sound image disappears, and if by that time the learner has not made available for himself a sentence framework

in which to place the sound image his efforts have been to a large extent wasted. The teacher must then give another oral stimulus in the hope that the learner manages to say the complete sentence before the sound image disappears once more. This phenomenon is the reason for the larger number of spoken stimuli, which had to be given in *Experiment 1*. Here the sound image disappeared before the pupils were able to say any sentence in one flow. The learners thus used the teacher's spoken examples mainly to form complete-sentence responses, and hardly ever to improve their pronunciation or intonation. The availability of the printed word, therefore, helps the pupil to accelerate process 1 (fluent sentence-imitation) so that he can concentrate on process 2 (accurate sound reproduction) at a much earlier stage.

When the printed word was not available, the children attempted to find some form of substitute. Many children tended to invent their own spelling for the foreign-language sounds they heard, to help them in sentence imitation. This discovery was made after the pupils were asked what they imagined during the initial learning responses for any sentence. Surprisingly, the children did not concentrate on the pictures referring to the spoken sentences, although they were looking at them. They attempted, in fact, to convert the sounds heard into some form of imaginary printed word with its own peculiar spelling. Only after the sentence could be spoken as one unit without hesitation and in the correct order of sounds, was the children's attention focused on the pictures available. Subsequent experiments with adults gave the same results.

Such attempts at finding a substitute for the printed word can bring with them serious drawbacks. When the children are ready for writing exercises at a much later stage, they will have fixed in their minds the incorrect spelling of the words already learnt orally. The teacher must then make the pupils unlearn fixed spelling habits, and it requires little imagination to realise what a difficult task this can be.

Another substitute for the printed word was the children's endeavour to make use of any indication which would help them to recognize the separate concepts expressed as words in a sentence, so that they could pin-point accurately the individual parts of the total sentence meaning. His awareness of the individual parts of the total meaning seems to govern, to a large extent, the learner's capacity to imitate sentences fluently. One example has been given above. Here the teacher made arm movements to indicate separate words, whereupon the pupils' responses improved dramatically. It seems that many learners convert the spoken examples of sentence concepts into spatial relationships during the imitation process, no matter whether it be the position

of the words in a printed sentence which can be scanned as the stimulus develops, or the successive movements of the teacher's arm relating to the individual words as they are being spoken.

Further comparative experiments were made to ascertain the degree of security and consolidation achieved by the learner. A basic situation consisting of 12 sentences was divided into two separate subsidiary situations consisting of alternative sentences taken from the original situation.

Basic Situation	*Subsidiary Situation 1*	*Subsidiary Situation 2*
Sentence 1	Sentence 1	Sentence 2
„ 2	„ 3	„ 4
„ 3	„ 5	„ 6
„ 4	„ 7	„ 8
„ 5	„ 9	„ 10
etc.	„ 11	„ 12
Sentence 12		

In the first instance, *Subsidiary Situation 1* was taught without the printed word, then *Situation 2* with the printed word. The procedure was then repeated in reverse with a new basic situation, where *Situation 1* was taught with the printed and *Situation 2* without the printed word.

At the end of each experimental set, both subsidiary situations were interwoven by means of a question and answer technique to create the wider basic situation. When the children were then asked to say any sentence or sentences that came to their minds without the teacher's stimulus, they invariably spoke sentences belonging to the subsidiary situations learnt with the aid of the printed word. It seems that these sentences were more securely consolidated than those learnt without the printed word.

The Written Word

Once a child is able to speak FL sentences fluently and accurately, it would seem an advantage for the pupil to learn how to write what he can say. Aberystwyth experiments showed, however, that the average eight-year-old child takes over 2 minutes to copy a known FL sentence consisting of 5 to 6 words. The less-than-average child can take up to 4 minutes. The sentence is in many instances copied inaccurately. If the sentence is dictated after several copies have been made, the time taken is only slightly less, although the time dispersion range of all class members is narrowed down greatly. The same children at the age of nine reduced their writing time by half to complete sentences of the same length.

In order to consolidate the correct spelling of three FL sentences, nine-year-old children require on average ½ hour (one lesson). If the teacher, therefore, attempts to make his pupils learn how to write what they can say, he will have insufficient time to teach his pupils to say something worthwhile in the first instance, as most of the time available will have to be devoted to writing exercises. This is a nonsense situation which should not be tolerated by the wise teacher.

Unfortunately, in Wales many primary teachers of Welsh as a second language are forced to teach in this paradoxical way because the 11+ selection examination contains a Welsh written test, but no oral examination. These teachers can, however, make the best of a bad job by ascertaining the optimum number of sentences which take up the least amount of writing time. It was found that the optimum sentence number for the experimental class (age nine) was 4 sentences. Any number greater or smaller than 4 increased the average time for any one sentence written.

It should be a matter of policy that the written word is not introduced into primary-school FL lessons in the first two years of language learning, if the language is not started before the junior school. The reason for this is not the traditional one that the written word interferes with the fluent and accurate expression of speech units already mastered by the children—no evidence to support this view was found—but simply that it is impossible in the time available for the pupil to learn how to speak fluently and accurately and at the same time learn how to write accurately the speech units he has mastered. Creative writing in the FL takes up an even greater amount of time, but as all aspects must be based on the pupils' ability to express themselves orally in the first instance, teachers and authorities, especially in Wales, where the problem of Welsh-language teaching in the primary school is a pressing one, must re-examine their educational priorities in language learning and testing.

METHODOLOGY

The Junior School

Various teaching techniques were used during the first 12 months of the course to ascertain the most efficient way in which primary school children could learn a foreign language in the classroom and yet find the activity a pleasurable one.

It was found eventually that the bilingual method, originally devised for teaching languages to secondary-school children and adults, gave the best results of all the techniques used, though certain modifications had to be made for primary children. Without doubt, there are other methods equally successful, but it would require further long-term research projects to measure the variables involved. As large-scale experiments in bilingual-method teaching of Welsh were also being conducted at primary schools in Caernarvonshire and Glamorgan with the same favourable results, it would seem appropriate if these pages were devoted to giving a detailed breakdown of the steps the teacher has to take to apply this method in the junior school, both with and without the use of audio-visual equipment or a language laboratory.

A report from the language Organisers of Glamorgan states:

"Although the Direct Method of teaching a second language has been held in high esteem in official quarters for many years, to our knowledge there are no teachers in Glamorgan who use this method without some modification.

" It is true to say that the Glamorgan Education Authority's scheme for teaching Welsh as a second language, 'Cynllun Cymraeg i Ysgolion Cynradd', when compiled was intended to be taught as far as possible by the Direct Method. The fact that it was left to the individual teacher to decide how much English he would use, illustrates the difficulties they experienced in adopting the Direct Method 'per se'. Furthermore, it was found that only the most gifted teachers were able to obtain success using techniques which involved using only the most limited amount of English. The goal of every teacher was to attain a certain standard of conversational Welsh, and to achieve this they found it necessary to use English in varying degrees. The results obtained in this way varied considerably from school to school, and from teacher to teacher.

"Since the Bilingual Method has become known, experiments have been conducted in a number of junior schools with such success that it is now advocated for general adoption in the junior schools of Glamorgan. Demonstration lessons have been given in the majority of the schools of Glamorgan to illustrate how this method can be adopted to the teaching of 'Cynllun Cymraeg i Ysgolion Cynradd'. It is now felt that what is needed is a re-draft of the material, to be taught by means of this method."

Materials

If the teacher does not have available a commercially prepared course and he is obliged to make his own material, he should pay attention to the following before giving his first lesson:

(1) the grading of vocabulary;
(2) the grading of speech patterns or structures.

All the material should be framed in "situations" which reflect the real interests of the children. Teachers are reminded that an adult's conception of what is of interest to children is often false and inaccurate. Even adults in constant touch with primary children will tend to be mistaken in their view of children's interests because teachers have been conditioned over many years to traditionally accepted centres of children's interests which are not based on careful investigation and analysis. Teachers should not fall into the trap of choosing situations which they think are of interest to children, but they should make every effort to find the children's real interests, which have not been distorted by the pre-perceptions of an adult mind. This study, called disponibility or "availability", should be carried out not only in the classroom; the teacher should also keep his eyes and ears open in the playground and especially in the streets after school.

Teachers will find that children's interests in the mid-sixties are more adult than they might assume them to be. This is probably due to the levelling effect of television programmes, which are being watched and discussed by the whole family. Moreover, children's outdoor activities and topics of conversation have been changed radically by advertising media and mass culture.

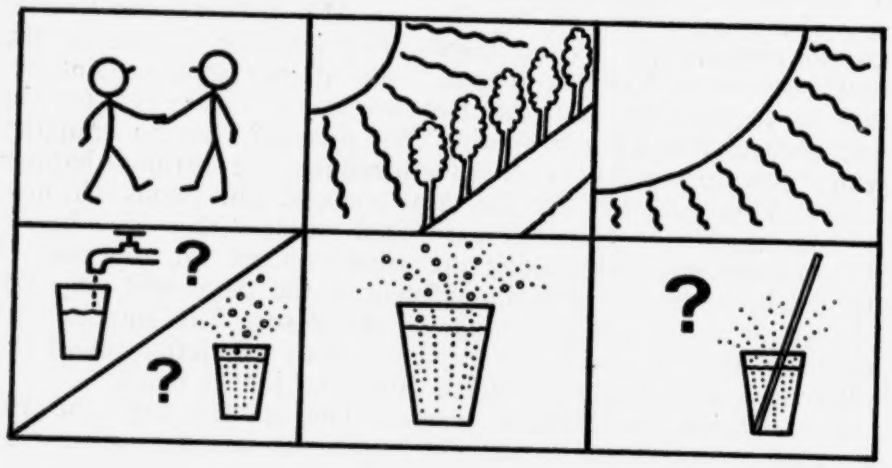
Each situation should consist of not more than approximately 10 sentences, and less than this for the beginning of the course. If possible, the vocabulary should be graded as to frequency of use. For some languages, graded word lists have been published. If nothing is available for his language, the teacher must use his common sense and select those words which he thinks are used most frequently and which spring naturally from the "situation".

Each situation should not contain more than one new structure or speech pattern. At some stages, depending on the language, no new pattern should occur for several situations. Whenever possible, the structures used should develop progressively, leading from the simple to the more complex pattern. There should be some association between each successive pattern used. At times this means abandoning traditional grammar progressions which have been formulated to deal with abstract grammatical concepts rather than the progression of patterns. For instance, in grammar books the affirmative tends to be followed by the negative, though the negative might have little connection with the affirmative as far as structure is concerned.

Each situation may contain some " filler " phrases or sentences to make the situation sound real. These " fillers " are phrases or sentences which do not belong to the pattern being taught in the situation or to those which might have occurred in previous situations. They should be patterns which are reasonably simple and, most important of all, they must be sentences which will constantly re-occur in one form only, e.g. " How do you do ", " Good morning ", " May I leave the room? ", etc.

A series of pictures should be made available for each situation, preferably one picture per sentence. These pictures can be very simple and could be drawn on to the board during the lesson. A flannelgraph could serve the same purpose. The pictures need not be exact representations of the sentences—this is an almost impossible task anyway—as they only serve to help the learner to *retain* the sentence-meaning, not to *acquire* it.

Here is an English example of part of a situation which deals with the way one offers and asks for things:



Hallo, Peter!
It is very hot to-day.
Yes, the sun is shining brightly.
Would you like a glass of water—or perhaps a glass of lemonade?
I should like a glass of lemonade, please.
Would you like a straw?
Yes, please.
etc.

Symbols, e.g. a question mark, may be used to indicate the precise nature of the sentence, so long as the same symbol represents one concept throughout the course. If the teacher feels so inclined, he can, of course, prepare a textbook with the pictures in a downward column at the left of the pages with the appropriate sentences to the right of each picture.

The Lesson

All the teacher's efforts are directed towards enabling his pupils to speak fluently and accurately about the situations being taught. The children may well take up to 10 lessons (2 weeks) to deal adequately with any one situation, depending on the age, I.Q. and size of the class. Lessons should not be longer than 20 minutes for seven or eight-year old children, and there should be at least one lesson per day.

The first task is to teach the children how to say fluently and accurately the sentences in the situation. This is done by means of imitation exercises. The teacher says the FL sentence whilst pointing to the appropriate picture. This is immediately followed by the mother-tongue equivalent of the FL sentence. If there is any discrepancy between the FL and MT patterns, the teacher should explain this to the pupils. For instance, if one of the sentences were 'Voilà la fenêtre', the teacher should point out that an Englishman must use two words, i.e. 'there is', for the one word used in French. Again, 'Wie geht es?' has no similarity with 'How do you do?' except for meaning. The Germans happen to say 'How goes it?' for the same concept. The pupils will now be less tempted to associate individual words with each other in the two sentences expressing the same concept. In any case, if the teacher does not explain differences, the pupil will only ask him about them at a later stage of the lesson. This implies that until the time of asking, the pupil has been wondering about the differences, thus being distracted from the job in hand.

Now begins the exercise proper. The teacher says the FL sentence several times, so that the pupils can become accustomed

to the total sound. A profitable way of achieving this is for the pupils to say the sentence in their minds alongside the teacher's spoken stimulus. After several stimuli, the pupils respond by mouthing the sentence, leading perhaps after the fifth stimulus to a voiced response, which develops in voice volume as the exercise progresses. During the initial listening responses, it was found that if the children put their heads on the desks and closed their eyes when imitating the sentence in their minds, the voiced response efficiency increased, probably because external interference stimuli were kept at a minimum.

After 8 or 9 of such stimulus—response processes, the pupils will have sufficient confidence to respond as individuals. It should not be forgotten that the average primary pupil might require 15 individual oral responses before he reaches a satisfactory level of proficiency.

The teacher should walk through the aisles of the class whilst saying the sentence. After each stimulus he should point to the child who is to respond. Children should be selected at random. This procedure should be carried out as rapidly as possible so that all pupils can give several oral responses. Whilst any one child is responding, the remainder should mouth the response being made at that moment. Once the children can respond reasonably well, the teacher need not give a stimulus for every response. He need merely point to obtain an immediate response.

If a child has difficulty in completing his response, he should be asked to take a glance at the printed word on the board. On most occasions, the difficulty will disappear. The teacher should not be tempted to say the sentence slowly in the mistaken hope that he is helping the pupil. Slowly delivered stimuli only serve to make the pupils' attempts at mimicry more difficult. In fact, the stimulus should be delivered to a slightly faster pace than the required speed of the response, as the pupils' pace of response delivery is initially somewhat slower than that of the stimulus.

If a pupil has difficulty with vowel or consonant reproduction, in spite of the above procedure, the sound should be practised in isolation, then in a word, followed as soon as possible by a return to the original sentence. Sounds should not be isolated before the complete sentence has been practised, as on most occasions the children are able to say the complete sentence units satisfactorily, and the teacher can waste a great deal of time on unneccessary practice of isolated sounds.

Chorus responses can be given every 5-10 stimuli, especially if the teacher finds himself in front of the class at any time during the exercise. All chorus responses should be conducted by the teacher by means of arm movements, so as to ensure clear and crisp reactions. At first, the class will tend to respond as if the

children were reciting. This should be discouraged by the teacher, who should insist on a perfect imitation of sentence intonation during chorus responses.

The printed word is available throughout the imitation exercise. The children should be allowed to glance at the printed word, but they should not be allowed to regard it as the main stimulus for their responses. In other words, the children should not be encouraged to read the printed sentences but merely use them as a help to imitate the sentences spoken by the teacher. This is best accomplished by letting the pupils look at the printed word whilst they are listening to the FL sentences spoken by the teacher or members of class. When it is a pupil's turn to respond he should look at the teacher or the picture and not at the printed word, so that the child is forced to rely on the spoken stimulus given by the teacher and on a *mental* image of the printed word during his response. Only if the child's response breaks down should he be allowed to look at the printed word during his repeat response. The aim is to make the pupils say the sentences, especially the longer ones, without looking at the printed word. Thus the teacher should take appropriate action when he feels that his class is reaching a level of consolidation by drawing their attention away from the print and towards the pictures or himself.

Once a satisfactory level of consolidation has been reached, the printed word can be taken away, so that the pupils can focus their full attention on the teacher's spoken stimuli and the pictures. It cannot be emphasised sufficiently, however, that throughout the exercise the teacher's spoken stimulus should always be the main centre of attention. The printed word is merely an aid and not an aim in itself.

The printed word will thus have been used only during the middle of the imitation activity. Initially the children will have listened to the teacher's stimuli with their eyes closed after having seen the picture to which the sentence referred. During this stage the responses will have developed towards voiced chorus responses. During the second stage the children respond as individuals and in chorus. Now the children can glance at the printed word if they so wish whilst listening, or if the teacher considers it to be necessary. Finally the only stimuli remaining are the teacher's spoken word and the pictures.

At times it might be wise to make a meaning check by asking any child for the MT equivalent of the FL sentence he is speaking. The teacher can then ascertain the appropriate number of FL responses made, or the time taken, before sentence meaning tends to disappear. Once this is established, the teacher can insert a MT equivalent at the approximate moment during the imitation exercise in order to give a meaning booster. This type of meaning

reinforcement will help to avoid a break in the rhythm of the imitation drills.

The establishment of such a rhythm is an important factor in the pupils' successful acquisition of fluency and accuracy. The experiments showed quite clearly that any break in rhythm caused a drop in the learner's level of oral proficiency. It can be seen in *Fig. 3* that a meaning check, which requires a new focus of attention, has a detrimental effect on the pupil's mimicry development. During the experiments, meaning checks were made after each third imitation response. A drop in proficiency is noticeable after the 3rd, 6th, 9th and 12th response. The teacher should thus ensure that no interruptions are caused by external influences during the imitation exercise. It follows also that the children should not be required to stand up or have their names called out whilst making their responses, as this causes an interruption.

The teacher should not practise more sentences than the class can consolidate in one lesson. It is advisable to practise sentences in groups of not more than 3 sentences. It is probable that a class of seven-year old children will not master more than one such group at the beginning of the course. This number increases gradually, and after one year it might be possible to teach a whole situation consisting of 10 sentences in one lesson. Teachers should not be discouraged, however, if their classes do not reach this number during imitation practice of new sentences. The primary child requires a great deal of active contact with the foreign language before he can handle sentences fluently and accurately (see ' Number of contacts ').

As soon as the children can imitate fluently and accurately, the teacher should initiate an interpretation exercise (MT stimulus —FL response). There are several reasons for introducing such an exercise.

Firstly, it helps to consolidate sentence meaning. The child cannot now respond without being aware of the meaning of the response, as it might well do during the imitation exercise. The MT stimulus conjures up the concept expressed in the original FL sentence. Thus the concept is more securely welded to the sounds of the spoken FL sentence. The pictures themselves cannot do this as the meaning of the pictures is initially referred back by the learner to concepts thought in MT terms, either consciously or unconsciously

Secondly, it will help the learner at a later stage to handle more efficiently situations expressed in a foreign language. The situations have been chosen because they are familiar to the children, and the concepts in the situations have in the past been associated with MT sentences. Yet the individual concepts have rarely been considered consciously by the learner and they, therefore, tend to

overlap and run into each other. In foreign-language learning, each sentence concept must be clearly defined by the learner or else his responses will be confused and inaccurate. This explicit reference to separate concepts in a total situation cannot be established very quickly by means of the foreign language in the first instance. It is, therefore, better and quicker to bring about this focus by means of mother-tongue cues, so that the learner can establish, as it were, an index of separate and clearly defined concepts which he associates immediately with the foreign-language expression.

Thirdly, constant contrast and comparison between MT and FL sentences helps to eliminate the learner's tendency to associate individual words in a FL sentence with individual words in the MT sentence. The MT sentence spoken by the teacher creates a total concept in the learner's mind and this concept is expressed by the pupil as *one* unit in the foreign language. Rapid interpretation thus destroys a word-by-word translation approach which the learner strives for unconsciously even with pure direct-method teaching because it gives him a false sense of security.

Fourthly, an interpretation exercise is an additional stimulus for FL responses. Moreover, it is easy to carry out by the teacher and gives a greater guarantee for obtaining correct responses than an immediate question and answer procedure. Most of all, the children enjoy the exercise, because it is something they can cope with.

Fifthly, if it is intended to make the child bilingual, then he must be taught how to switch rapidly from one language to the other. This switching ability from one system to another, which is a sign of true bilingualism, can only be brought about by interpretation exercises. Direct-method approaches tend to build a solid wall between the two languages, so that the pupil is never in a position to react easily and rapidly to a situation which requires transfer from one language system to the other. This is especially true for bilingual countries such as Wales, and for parts of the world where a major world language is used as an official second language.

From a teaching point of view, this exercise requires no new techniques. The sentences used are those which occurred in the original situation. The teacher moves through the class as in the imitation exercise. He points at the child who must give the response. The pace of the exercise should be as fast as possible. After the children have given several responses each, the teacher should move to the front of the class and point with one hand to the appropriate picture, say his MT stimulus and point with the other hand to the child for a response. After a while, the MT

stimulus can be omitted. The teacher merely points with one hand to a particular picture and with the other to the child.

Once the children can say the sentence in response to the picture only, they are encouraged to say more than one sentence. It will be found that the pupils will be able to say all the sentences in the situation without the teacher's oral stimulus by merely looking from one picture to the other. At this point the situation should be acted out in the classroom by groups of children so that the spoken word and the real-life situation are merged. Whenever possible, normal primary-school activity equipment should be used, e.g. a shop, house, café, etc.

At the beginning of a course, this stage is probably reached after 5 lessons or more for a situation of 10 sentences. At all other times, 3 lessons or less are usually sufficient to reach this point. In order to bring variety into the lessons, it is advisable to put sentence groups of 3 sentences each through all the above processes in turn and build up the total situation slowly. This does not slow down the learning rate of the children, but will ensure that a variety consisting of imitation, interpretation, independent speaking of sentences and play-acting occur in a single lesson.

The children are now ready for a FL question and answer exercise. If question patterns have not occurred in the original sentences, they must be taught separately. The questions should be framed so as to elicit answers which are the original sentences learnt. An extension of this is a question and answer exercise in conjunction with play-acting. A group of children acts out the situation silently in front of the class, whilst the teacher asks the class questions about the individual actions of the participants. Once again the answers required are those learnt initially.

The next step is a substitution exercise. This is done once again by means of an interpretation drill. If three of the basic sentences were:

John is eating bacon and eggs.
Mary is drinking a cup of tea.
Mother is talking to Bill.

then the teacher substitutes the elements in the sentences, e.g.:

Mary is eating bacon and eggs.
John is talking to mother.
Mother is drinking a cup of tea. etc.

The teaching technique is the same as that for the interpretation drills: rapid delivery of MT stimuli and immediate FL responses. This exercise enables the children to extend their range of expression beyond that governed by the original set situation. Care

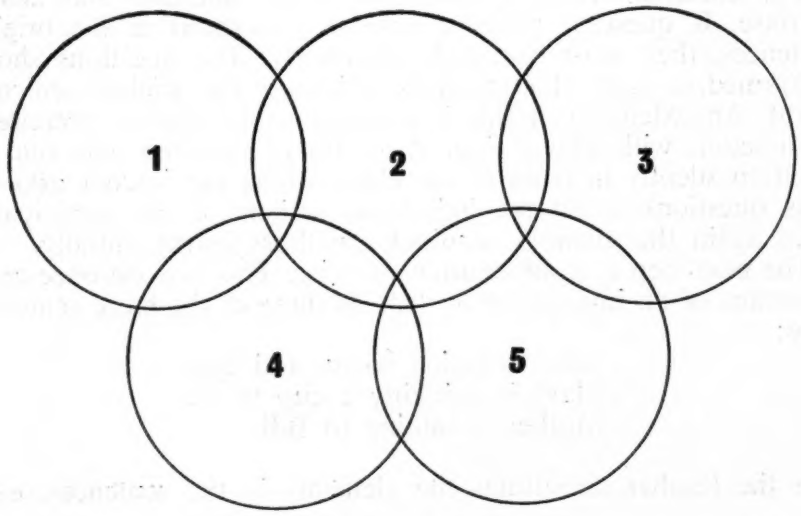
should be taken, however, not to alter more than one sentence element at a time. An attempt should also be made to extend the length of the sentence by stringing together sentences learnt separately, e.g. 'Mary is eating bacon and eggs *and* (*but*) John is drinking a cup of tea.' Conjunctions which alter the word order of the second clause should not be used.

This is followed once again by independent speaking of sentences without MT stimulus, only this time the pupils' range of response will have been greatly extended.

The final exercise is a further FL question and answer based on the wider situation, eventually leading to normal FL conversation. At this point every attempt should be made by the teacher to bring in the contents of previously learnt situations so as to widen the child's horizon still further.

It is, therefore, important that individual situations overlap in content. If they do not, the teacher must create associations during the final FL question and answer procedure after the substitution drills.

SITUATIONS



Let us assume the teacher is dealing with *Situation 4*. The final conversational exercise should lead the teacher and his pupils quite naturally into *Situations 1*, *2* and *3*, thus ensuring not only constant revision of work done but also a widening of the pupils' power of expression in multi-situational combinations. It is these combinations of situations which are a true reflection of what the pupil will be faced with when he visits the country whose language he is learning. At this stage, the teacher should also make the

pupils evolve their own question-and-answer technique. Questions should not always be asked by the teacher. The questions which the pupils put should arise out of the situations and activities experienced by the children throughout the course.

Thus the steps taken for any single situation are:

1. Imitation of basic sentences.
2. Interpretation of basic sentences.
3. Independent speaking of basic sentences.
4. Acting the situation, games, songs and rhyme, and activities devised for eliciting oral FL responses.
5. FL question and answer exercise dealing with basic situation.
6. Substitution and extension exercises to widen basic situation by means of interpretation drill.
7. FL question and answer exercise dealing with extended situation.
8. Normal FL conversation dealing with new and old situations, leading very often to completely new and original situations.

Not every step can be carried out in a single primary-school lesson. It is likely that an average class requires a learning cycle consisting of more than 5 lessons to reach the final normal FL conversation stage for any one situation. Nevertheless, every lesson should include steps 4 and 8, no matter what step the class has reached for the situation taught at that time. This means that every lesson will include activities and foreign-language conversation, but that on most occasions these two steps will deal with the content learnt in previous situations and are, therefore, revision work. Let us assume *Situation 5* is being taught in *Lessons 21, 22, 23, 24* and *25*. The following is a possible distribution of steps in the learning cycle:

Lesson 21

Step 8: old situations.
„ 1, 2, 3: part of new situation.
„ 4: old situations.

Lesson 22

Step 4: old situations.
„ 1, 2, 3: remainder of new situation.
„ 8: old situations.

Lesson 23

Step 8: old situations.
„ 3, 4, 5: new situation.
„ 4: new + old situations.

Lesson 24

Step 4: new + old situations.
„ 6, 7: new situation.
„ 8: new + old situations.

Lesson 25

Step 8: new + old situations.
„ 4: new + old situations.

There has in the past been a tendency to overrate the linguistic benefits derived from song and rhyme. It is most difficult to find songs and poems with speech patterns which coincide with the patterns taught at the time. Moreover, they often include patterns which have been distorted by the writer to satisfy the demands of rhyme and rhythm, and they can, therefore, be harmful to the learner. Nevertheless, the primary child enjoys singing and reciting poetry, and songs and rhymes must find a place in the activities intended for language-learning courses. They are, therefore, included in step 4. Teachers should, however, take great care in the selection of songs and poems by ascertaining that the patterns used are acceptable. Furthermore, the inclusion of a song should not transform a language lesson into a straight-forward singing lesson, which is of little use as far as the acquisition of a language is concerned. It is more profitable to consider the learning of foreign songs and poems as a cultural activity rather than as a language-learning process (see Foreign Culture). If the teacher is interested more in the teaching of songs than in the teaching of language, then he should utilise his singing lessons on the time-table for the teaching of foreign songs and leave his language lessons free to deal with the job of giving his pupils an opportunity to learn how to speak the foreign language.

PERSONALITY

Although this pamphlet is intended mainly for the experienced teacher who wishes to introduce a foreign or second language into his school or who feels that the time has come for a change of method in his own teaching, some reminders concerning the teacher-pupil relationship required for effective bilingual-method teaching might not come amiss.

In the past, teaching methods have relied heavily on the personality of the teacher. In order to satisfy the learner's needs, these methods required that the teacher possessed a certain type of personality. Without this personality, the teacher achieved little success. Unfortunately, the kind of personality required was present in only a privileged few who were lucky enough to have been born with it.

Researchers involved in the development of modern teaching techniques have taken note of this and have attempted to reduce this drawback as far as possible.

It is now recognised that the best and perhaps the only way in

which a human being learns a second language is for him to have the maximum number of meaningful and purposeful contacts with this language in useful environments and situations. It is, therefore, important that this most important factor is built into the method, and that the contacts are easily achieved without relying too heavily on a particular type of teacher personality to make them available. It is obvious that from a purely methodological point of view the bilingual method satisfies this demand. The child is made to respond quickly, accurately and frequently throughout all the learning stages without being primarily motivated by the personality of the teachers.

What in fact has taken place is an increase in the degree of success for every teacher. The teacher with a 'poor' or even 'average' personality, who in the past has not been able to achieve any worthwhile measure of success, is now assured of some success because the method takes care of some of the learning requirements of the pupil. The teacher with a 'good' personality, however, can achieve greater success than hitherto because the method re-inforces his personality and vice-versa.

Those teachers who are not blessed with outstanding teaching personalities—and by definition this includes most of us—should, therefore, make every effort once they have mastered the technicalities of the method to concentrate on their personal place in the classroom. Even though the method supplies the contacts, it cannot supply the rewards. This has not yet been built into any method involving teachers (a teaching machine does not involve a teacher) and perhaps it is good that it has not. For any method which elicits a greater number of contacts in a lesson, the pupil requires a proportionally greater number of rewards. It is in this sector that the teacher's personality begins to play a greater role. The teacher should, therefore, consider the following points:

The pupil must recognise whether the response made has been a correct or an incorrect response. The teacher must develop his own behaviour pattern, which the learner can recognize immediately, which will tell him whether his response has been correct or not, and which will encourage him to make further contacts willingly.

If the response is correct, the teacher's appropriate indication of this, and what is technically called the 'reward', should occur simultaneously, because the next stimulus follows immediately.

It does not cost the teacher anything if he smiles for a correct response, or if he makes an 'O.K.' sign with his hand or combines facial expression with movement of the hand or arm. These little things are of great importance to the learner. A correct response is not sufficient in itself; the child needs re-assurance, recognition and approval from the teacher.

If the response is incorrect, the teacher should not show annoyance but give a neutral indication that an error has been made, together with some expression which will show the pupil that no harm has been done and that he can improve in future responses. With the bilingual method, especially after the imitation step for any situation, incorrect responses are usually caused by incorrect cueing on the part of the teacher rather than the inattentiveness of the pupil. Thus no matter whether the response is correct or incorrect, the teacher's personality should always portray positive rather than punitive values, because the teacher must reward the effort the child makes for any response. If the teacher neglects this, he will find that any future responses made by the children will no longer be pleasurable because they are made under pressure, and he will have upset one of the motivational bases of classroom language-learning. He will then, also, have made his own job much more difficult and strenuous.

In other words, the teacher should place himself in a position where he is a coach standing on the side lines, spurring his pupils on to greater effort to run, as it were, a 4-minute mile. Your pupil may not succeed immediately, but he will never succeed if his training is made distasteful.

Basically we are faced with the fact that there are deeper things involved in the teaching of language than merely motivating the pupil to learn it. If language learning takes place in a school, then it is part of the wider process of educating the young. It is here that the personality of the teacher plays its greatest role, where human relationships between teacher and pupil are crucial in the proper development of our future citizens.

Foreign Culture

When a foreign or second language is learnt, it is not sufficient merely to learn it as a new system of communication. The foreign language is an integral part of a way of life which is as important for the pupil to learn as it is to acquire its spoken symbols.

In making his pupils appreciate the 'Frenchness' or 'Welshness' of the new language, the teacher should examine the best possible way in which this can be done. It should be realized that the learner of the new language considers the spoken symbols and the 'culture' in which they are set to be separate items. When making the pupil learn to combine these two factors, separate learning processes are required in so far as the pupil can only deal with one aspect at a time. Great care should, therefore, be taken that one aspect is not learnt at the expense of the other. It is advisable at the beginning to bring the pupil into contact with those factors of the new culture which are the same as or similar

to the native culture of the learner. These factors can, therefore, be built into the 'situations' without distracting the pupil from the task of learning the spoken symbols. Only at a later stage, when the child has a firmer grasp of the language, should unfamiliar concepts be brought into the language-learning process. The teacher may, of course, set aside time to teach the cultural aspects separately through the mother tongue.

The same principles apply to vocabulary which might have different shades of meaning in the two languages. Initially only those words which have a clear one-one relationship in the two languages should be taught. This does not preclude terms where a difference can be easily portrayed visually, e.g. a policeman wearing a French or German uniform. The teacher should not teach those terms, however, which owe their peculiar meaning to a cultural aspect as yet unknown to the child.

Reading and Writing

Once the children have a good grounding in the spoken language and by the time they are learning peripheral subjects through the medium of the foreign language, they should be introduced to properly graded foreign-language books. Up to now they have only made use of the printed word as a point of reference to help them in the acquisition of oral proficiency. Now they can be faced with an activity which will greatly widen their horizons. A warning should be given immediately: the children should not be made to read for any reason other than personal pleasure. On no account should foreign-language reading be utilized in formal exercises. Moreover, teachers should be discouraged from making pupils read aloud in formal reading exercises. It should not be forgotten that the child has already acquired the basic reading skills in his mother tongue.

Research is also beginning to show that oral reading tends to have a detrimental effect on the fluency of the spoken word, as well as retarding a good silent reading speed which is the real aim of any reading activity. Children should, therefore, be encouraged to read silently. The teacher can always make use of the contents the children have read in FL conversation lessons so long as this activity does not develop into pure comprehension tests. Such tests have no place in FL primary-school learning, if the language is started after the infant stage. The implicit reason of the teacher why children read may well be a widening of the pupils' mental horizons, but the explicit reason why the child reads should always be that it gives him pleasure.

Some observations on the written word have already been made in a previous section. The prime purpose of FL primary-school

courses is to help the child to develop oral proficiency. The written word at the beginning of a course hinders this development. Only in the last year of the primary school should the teacher attempt to make his pupils write the foreign language. It cannot be stressed sufficiently, however, that writing must always be based on prior oral proficiency and not the reverse. Correct spelling should be learnt through copying and dictation work, and be sub-consciously re-inforced through pleasurable reading. The content about which the children write should be purely functional, e.g. the writing of letters. If a teacher feels that the children cannot cope with learning how to speak *and* write, he should not hesitate to neglect the written word.

Audio-Visual Aids

The procedures outlined for language-teaching without the use of commercial audio-visual aids consisting of film strip and tape are based on the findings of the experiments described at the beginning of the pamphlet. Some of the results conflict with the techniques recommended by audio-visual aids manufacturers. In order to satisfy the learners' needs, the following modifications are recommended:

1. After a frame is projected onto the screen and before the spoken stimulus is heard from the tape recorder, the teacher should say the mother-tongue equivalent of the sentence about to be heard. If this proves impossible owing to the distribution of the silent gaps, the teacher should show all the frames of the lesson without playing the tape. Instead he should give the MT equivalent as each picture is shown. Only then should he proceed with the imitation exercise as recommended by the manufacturers. This will ensure that sentence meaning is acquired immediately and is then retained by means of the pictures.

2. Audio-visual courses rely heavily on chorus responses during imitation exercises. The teacher should rectify this by inserting a teacher-pupil imitation exercise as described previously. He may do this without showing the pictures if he feels that a semi-darkened room is a hindrance. An attempt should be made, however, to light up the room sufficiently without losing the picture on the screen so that class-teaching can take place. A pupil should be trained to turn the frames so that the teacher can move freely in the classroom.

3. The teacher should insert an interpretation exercise (step 2) for the reasons given above. Again this should be done with the pictures, whenever possible.

4. The teacher should insert an independent speaking exercise. Individual children should be encouraged to relate the story of the situation without hearing the tape stimulus. The pictures thrown onto the screen should form the stimulus.

5. Question and answer exercises should be carried out as per the manufacturer's recommendations.

6. Play-acting of the situation should be encouraged, whenever possible with equipment.

7. The teacher should add a substitution and extension exercise by means of interpretation drills to widen the basic situation. The sentence variations should, whenever possible, be based on the unintentional ambiguities found in the pictures. For instance, if a family is shown eating breakfast and if the sentences to be learnt are those given in the description for substitution drills (John is eating bacon and eggs, etc.), the teacher should make use of other actions, persons or objects shown in the picture, but not referred to on the tape, to make new sentences belonging to the same FL structure.

8. Greater stress should be laid on combining the situation in hand with those learnt on previous occasions, as described in step 8.

The Language Laboratory

The language laboratory holds no terror for primary children. All the pupils in the experimental class mastered the manipulation of the machines within minutes and were practising on their own before the end of the first lesson in the laboratory. The beneficial effects of laboratory practice were evident in follow-up classroom lessons. Once again it was found necessary to include interpretation programmes to prevent the children from giving "empty" responses.

It has not yet been possible to determine an ideal combination of language programmes, though the following programme order has given good results:

(a) Imitation programme (basic sentences).
(b) Interpretation programme (basic sentences).

(c) Substitution and extension programme (MT and FL stimulus).
(d) FL question and answer programme with preliminary FL statement.

A whole series of other programmes could be made by the teacher. The programmes mentioned here are made as follows:

Words in SMALL CAPITALS = teacher's stimulus.
Words in *Italics* = pupil's response.

(a) FL SENTENCE 1 *gap for pupil's imitation response* // FL SENTENCE 2, etc.
(b) MT SENTENCE 1 *FL response* FL MODEL *FL re-inforcement* // MT SENTENCE 2, etc.
(c) as for (a) or (b).
(d) FL SENTENCE 1 FL QUESTION *FL answer* FL ANSWER *FL re-inforcement* // etc.

All these programmes include model responses (except, of course, programme (a) which does not require one) so that they are acceptable from a group teaching point of view. It should be pointed out, however, that primary children should not be sent into the language laboratory to *learn* new material but only to *consolidate* material already learnt in the classroom.

It cannot as yet be said with certainty whether the most effective programme is a single cue-response programme or a continuity drill programme.

These programmes can, of course, be used for obtaining active responses in the classroom by employing a tape recorder. The children can be made to respond in chorus or as individuals.

Foreign-Language Medium

No language is learnt properly by primary children if the language is not used in normal school lessons when other subjects are being taught. It is important to make certain, however, that the teaching of other subjects through the medium of the foreign language is not carried out before the children are ready. The theory of an immediate "language bath", where the teacher just holds forth in the foreign-language is a questionable one. If junior-school children are "thrown" too soon into a situation where they hear nothing but the foreign language and yet are required to learn about the content of the lesson, serious drawbacks can arise. It is often stated with pride that with a language-bath technique the children are plunged headlong into the

language, thus making them either "sink or swim". Unfortunately, most of them will sink, with obvious effects on the personality of the child.

The language-bath theory should not be confused with a carefully planned language-learning approach intended for children in nursery and infant schools, as will be described in a later section.

In the junior school, the greatest care should be taken to ascertain the right moment when a switch to a FL medium lesson can be made. With the bilingual method, teachers have found that the right moment occurs approximately 18 months or even less after the first language lesson if the class has received one lesson per day.

FL medium lessons should first of all be given for 'peripheral' subjects, such as P.E., games, art, craft, singing, drama, domestic subjects, etc. The materials produced in some of these FL medium subjects can be used for other language lessons. For instance, in a FL medium craft lesson, the children make puppets which are then used in a drama lesson for acquiring further language material.

The definition of 'peripheral' here denotes:

1. The subject should not be basic for the learning of other subjects.
2. The subject should not require high academic ability.
3. The subject should be an 'activity' subject.
4. The pupil need not understand fully everything the teacher says in the foreign language in order to execute the activity satisfactorily.

The experimental class which received three lessons per week was taught Geography, Social Studies, Current Affairs, Astronomy, Space Science and other subjects of interest to the modern primary child, through the medium of German at the beginning of the third year.

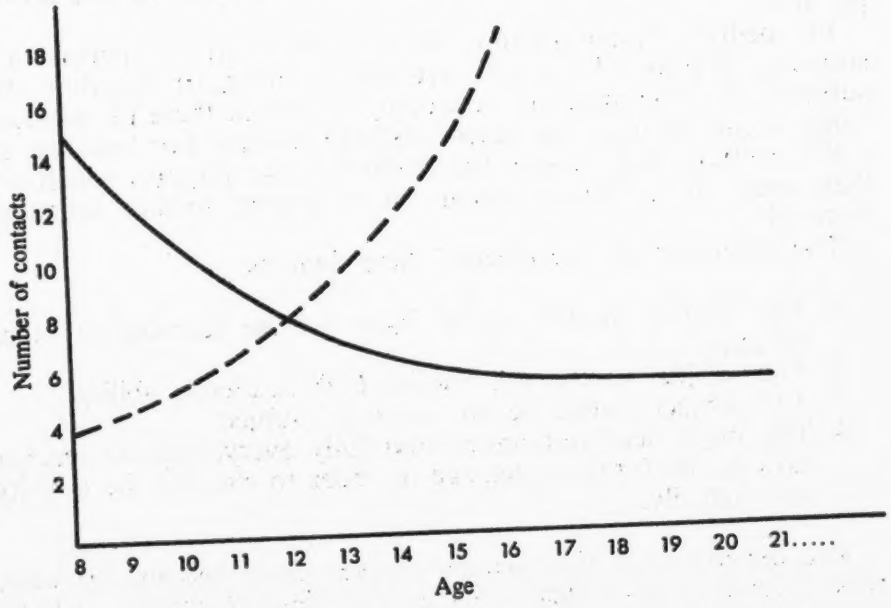
Number of Contacts

Neurologists and psychologists are agreed that the capacity for imitation is maximum between the ages of 4 to 8 and that it decreases steadily throughout later childhood. It has already been mentioned that the Aberystwyth experiments showed that a sharp distinction must be made between the capacity to imitate sounds accurately and the capacity to imitate sentences fluently. In all the tests made with adults, secondary children and primary children, it was found that the capacity to imitate sentences fluently increases with age up to about the age of 18, when the rate of

increase levels itself out. The capacity to imitate sounds accurately, however, decreases the greater the age.

For instance, eight year old children require on average 15 listening and speaking contacts before they can imitate a sentence of given length and complexity. A child of 12 requires only approximately 8 contacts for the same sentence, whilst the average adult is able to imitate fluently after only 3 to 5 contacts (*Fig 4*).

On the other hand, the capacity to pronounce FL sentences correctly is greater with primary children and decreases with secondary children and adults (*Fig. 4*).



——— No. of contacts required for fluent sentence-imitation.

– – – – No. of contacts required for correct pronunciation-imitation.

Fig. 4.

This ability of the very young child to imitate pronunciation correctly is no doubt due to the plasticity of the neuro-muscular system, although some basic pronunciation difficulties were already encountered with eight-year-old children.

It could be argued that the primary children were able to learn correct pronunciation more readily, because they had to experience a greater number of active language contacts than an adult to reach a stage of fluent sentence imitation. It was found, however, that pattern elements consisting of the same words, but

occurring in different contexts throughout the experiments did not increase the adult's capacity to imitate a more correct pronunciation.

A permanency experiment showed that language material is consolidated more efficiently the lower the age. The probable explanation for this is the fact that the younger the child the more contact time he requires to reach a stage of consolidation. In neurological terms, the larger number of contacts influences the child's neuron development and setting, thereby making consolidation more secure.

For example, eight-year-old children did not lose their immediate automatic linguistic response to particular stimuli after a break of 12 weeks, whilst secondary children and adults had to undergo a booster learning process in order to reach their original threshold of consolidation which had become reduced during their absence from the linguistic environment (*Fig. 5*)—

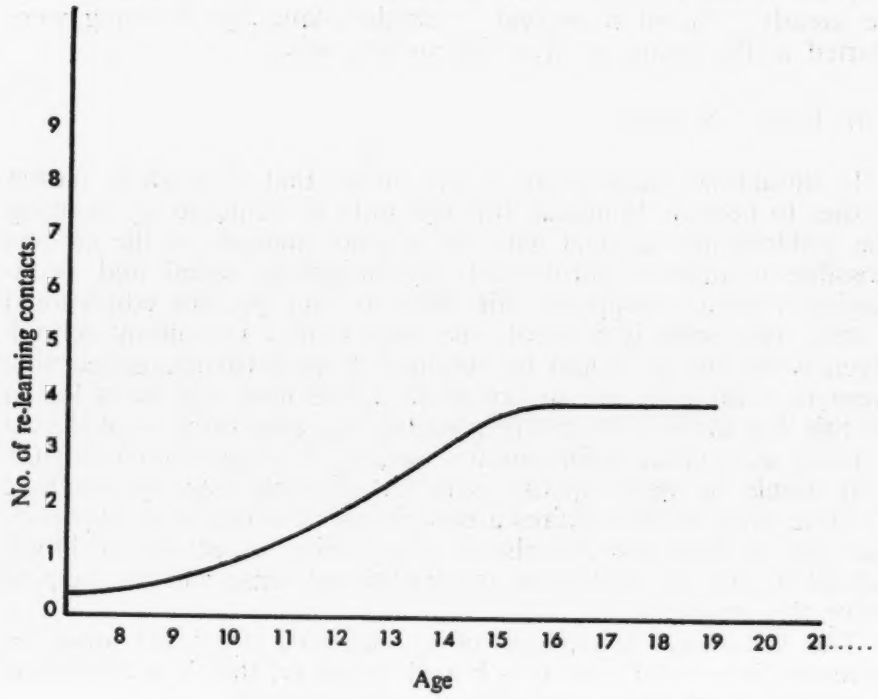


Fig. 5. Degree of consolidation after 12-week break.

The Backward Child

As far as can be ascertained, approximately 5-10% of the children in a normal primary school will not be able to derive a

great deal of benefit from modern-language lessons under present conditions if language lessons are only started in the junior school. Firstly, the lower the I.Q. of the child, the greater the number of active FL contacts he requires to reach a satisfactory level of consolidation. Under normal classroom conditions, these children cannot be given the number of contacts they require. Secondly, this type of child has great difficulty in imitating even the most simple sentences. Without this basic capacity there seems little hope that these children at this late stage will be able to keep up with their school fellows. Thirdly, these children are usually unable to read or even to recognise the sounds of individual letters and are, therefore, not in a position to take advantage of the printed word as described above.

It is possible, however, to cater for these children in separate streams if society's demand for universal modern-language teaching in primary schools so requires it.

What is certain is that the difficulties of these children would be greatly reduced if second or modern-language learning were started in the infant or even the nursery school.

The Infant School

It should be made clear at the outset that if a whole nation wishes to become bilingual, this can only be achieved by bringing the children into contact with the second language at the earliest possible moment. Neurological, psychological, social and pedagogical evidence supports this view. In our present educational system, this point is normally the child's entry into infant school. Even better results would be obtained if second-language learning were to commence at nursery level. There may well be a lesson in this for those who are responsible for education in Wales, a country with great ambitions for making its population bilingual.

It should be made equally clear that effective language teaching at these early levels requires a completely new and fresh approach not only to language but also to every other aspect in the infant school. Formal education in the traditional sense will not help to solve this problem.

The following description of a suggested approach must of necessity be a brief one. It is hoped, however, that it will serve as a starting point for further thought and research.

A child learning an additional language at this early age is no longer dealing with a foreign language but with a second language, because the new language will become an intrinsic part of the child's total make-up.

Basically the child will have to pass through four distinct learning processes before it reaches true bilingualism:

(1) Learning the second language (SL) through play-activity.
(2) Play-activity through the medium of SL.
(3) Peripheral subjects through the medium of the SL.
(4) Crucial subjects through the medium of the SL.

For all these four processes, the teacher must devote approximately 50% of the total time available at school to the SL.

(a) *Learning the SL through play-activity.*

The aim here is to get the children involved in some form of activity but an activity *not* dependent on verbal stimuli given by the teacher.

For instance, the following group activities may take place simultaneously in the classroom: painting on paper, painting on easel, playing with sand pit, playing with blocks, toys, etc., playing house (a structure set up in the classroom), looking at pictures and books, playing with apparatus (boxes, etc.). Groups should consist of not more than four children each, whilst the activities should be of a kind which enable the child to acquire dexterity of manual skills for bodily development and a true understanding of the basic concepts of number, scale, position, etc. In other words, all the activities advocated in a modern and progressive infant education must be applied. Nevertheless, there is a great need for the development of a whole range of new activities which would help the child to grow more securely in body and mind.

All these activities must be self-generative and should not require a great deal of *verbal* communication between teacher and pupil to be successfully carried out by the children.

(b) During these activities, the teacher should talk continuously to the children in the SL. It is probable that the SL spoken by the teacher will in no way further the involvement of the child in his activity. This point is an important criterion in the development of the techniques employed.

(c) The school should have the services of an infant assistant. The assistant's task should be to observe very closely each individual child with a view to ascertaining the degree of boredom any child might show in his activity. As soon as any form of boredom is noticed, a new piece of equipment should be put into the child's hands. Such a procedure is vital in a situation where the activity must be self-supporting without a constant verbal form of communication focused on the actual operation of the activity.

The teacher is, therefore, free to devote all his/her time to speaking the SL to the children. If the assistant were also able to speak the SL, this would help to re-inforce the teacher's influence.

(d) The content of the spoken SL should be carefully graded as to vocabulary and structure. The sentences spoken by the teacher should be focused on subsidiary activities revolving round the main activity, though not vital to it. For instance, a child who is drawing, could be asked or told to take his brush out of a jar of water, or a child building a house with blocks, could be told to pick up a block from the floor, etc. It does not matter whether the child understands or not. If he does not understand, then the sentence is repeated. If no reaction is forthcoming, the teacher takes the brush out of the jar, once again repeating the sentence. After some weeks of this procedure, the children will be in a position to *understand* constantly re-occurring commands or requests.

(e) The grading of the language arises out of the situation. Two main patterns will be consolidated initially, the imperative and the interrogative.

The imperative and, to a small extent, the interrogative arises out of the situation described above. In the main, however, the interrogative arises out of questions asked about the activity and requires single word responses (Yes or No), or action responses (nodding of head, etc.).

(f) All general classroom instructions not arising out of the activities (open the window, etc.) should always be given in the SL and will eventually be understood by the children because they are repeated every day.

(g) It follows that initially there is little verbal response from the pupils, although every child is totally involved in his activity. It is probable that the children will not make any sentence responses during the first 8-10 weeks (equivalent in contact time to more than a year's 'O' level course). During this stage the children are grappling with understanding and the problem of meaning.

The children are able to find verbal release by talking to their fellows in the MT. Furthermore they will be able to speak to the teacher in their MT during the other half of school time devoted to activities carried out in the MT. It is important that two classes should share their teachers, so that one teacher is available to create a MT environment whilst the other constantly deals with the SL environment. Furthermore, the SL teacher should never be tempted to speak to the children in the MT throughout the school day (or even after school). This implies that the SL teacher must be a teacher who can inspire confidence in the children, who should not hesitate to approach him/her, even though there might be communication difficulties at the beginning.

Concerning verbal communication during the activities, it is true to say that a 5-year-old child does not require a great deal of verbal release when he is able to absorb himself completely in a pleasurable activity.

All the activities described so far deal with the way in which a child is brought to a level where he *understands* the second language.

(g) Once the children have reached this stage, perhaps after one or two terms, depending on the class, the verbal element becomes of greater importance in the efficient execution of the activity. Here the second stage becomes apparent:

(h) *Play-activity through the medium of the SL.*

For instance, the children could be made to play with blocks and rods arranged in a particular order. They could then be made to re-arrange these according to the teacher's instructions. This would, in fact, be an arithmetic lesson.

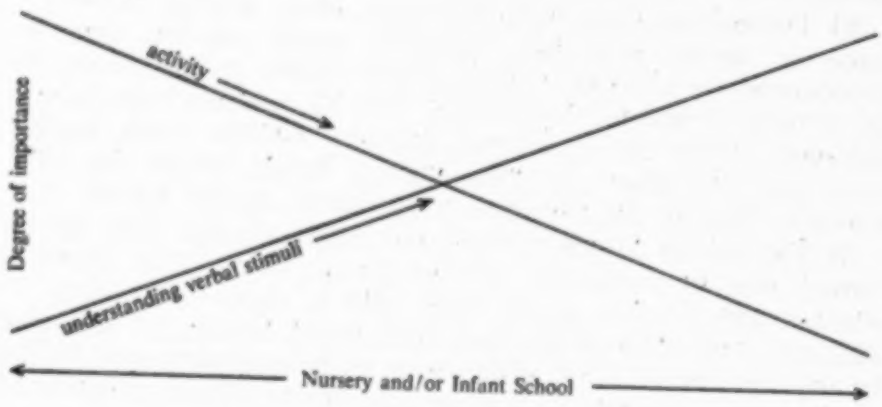


Fig. 6. Relative importance of play-acting and understanding of verbal stimuli determining the child's behaviour.

To the left of the point of intersection, the children are learning the SL through play-activity.

To the right of the point of intersection, the children are participating in play-activity through the medium of the SL.

(i) Whilst the children are learning the SL through play-activity, the learning process is speeded up by the telling of stories. The same stories are told, perhaps 4-5 times, at intervals of a week or so. At the first telling, no verbal response is required and it is, therefore, unimportant whether the children have under-

stood the individual sentences or not. In general, the children have an inkling of the total story, because it is told together with actions and visual stimuli. Each further telling is combined with new pictures and actions so as to avoid boredom. At the Barry Welsh School, the children are able to involve themselves orally after the second telling, and their verbal responses progress from single-word responses to full sentences, especially if the sentences are similar to those heard and spoken in other activities.

(j) The story-telling involving verbal responses from the children is a preparation for another type of activity which the Barry school calls "News". At the beginning of each day, the children are encouraged to relate in the SL the happenings of the previous day.

This activity consists of two types of exercise:

(1) independent speaking of sentences and (2) a question and answer procedure.

(k) Throughout these learning stages, every attempt should be made to bring into the classroom every real-life situation experienced by children outside school hours and to relate the SL to these situations. This implies that SL teachers must behave differently from the traditional primary teacher. Each teacher must take the place of those human beings whom the child normally finds in the situations experienced outside school.

(l) The school atmosphere in the infant classes must be informal and the activities require group work. It is doubtful whether any teacher could cope with a class larger than 25 children. Any class larger than this would require an assistant. In any case, an assistant would seem to be necessary even with a smaller class, so that the teacher can devote all her attention to the verbal aspect of the school work, as described above.

The infant-school ideas outlined here are not armchair theories. Most of them are being applied successfully at schools such as St. Ffransis, the Barry Welsh School, where monoglot English-speaking children are made truly bilingual in English and Welsh by the time they reach the junior school.

The education in the junior school must, therefore, be bilingual. Initially, peripheral subjects as defined above should be taught through the medium of the SL. By the time the child leaves the primary school crucial subjects which are basic for the learning of other subjects, e.g. Arithmetic, and which require a full understanding of the SL, should be taught through the SL.

Such an approach blends in perfectly with modern theories of primary education. It might well be that a demand for SL teaching

in the infant school will be the necessary incentive to bring about more speedily the radical changes so desperately needed in the general education of the primary child. Play-activities directed towards developing the child's mind and body will certainly produce a more balanced human being. If this is combined with giving the child an opportunity to learn a second language, the individual, society and the world will be the richer.

LIST OF PAMPHLETS

Published by the Collegiate Faculty of Education, edited by the Dean of the Faculty, Professor Jac L. Williams.

Pamphlet No. 1 (1953). Price 1/-.
A Review of Problems for Research into Bilingualism and Allied Topics.

Pamphlet No. 2 (1954). Price 1/-.
A Welsh Linguistic Background Scale.

Pamphlet No. 3 (1954). Price 2/-.
The Construction and Use of Standardised Tests of Intelligence and Attainment with special reference to the problems of a mixed language area.

Pamphlet No. 4 (1957). Price 1/-.
Bilingualism and Non-Verbal Intelligence: A Study of Test Results.

Pamphlet No. 5 (1957). Price 1/-.
A Welsh Word Recognition Test.

Pamphlet No. 6 (1958). Price 6d.
The Sixth Form Education of Training College Applicants.

Pamphlet No. 7 (1960). Price 4/6d.
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Pamphlet No. 8 (1961). Price 1/6d.
The Presentation of Welsh as a Second Language.

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The Bilingual Method.

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Graddio Geirfa.

Pamphlet No. 11 (1962). Price 4/6d.
Teaching Welsh as a second Language. A Bibliography.

Pamphlet No. 12 (1963). Price 2/6d.
Oral Examinations.

Pamphlet No. 13 (1965). Price 2/6d.
Oedolion yn Dysgu Cymraeg (Adults Learning Welsh—A Study in Motivation).

Pamphlet No. 14 (1966). Price 5/-.
Foreign and Second Language Learning in the Primary School.

The Faculty also publishes an annual Bulletin in February of each year, containing news and articles relevant to the activities of the Faculty.

Copies may be obtained from: The Dean, Faculty of Education, University College of Wales, Cambrian Street, Aberystwyth.